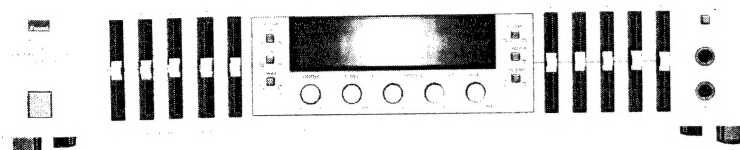


SERVICE MANUAL

STEREO GRAPHIC EQUALIZER CONSOLETTTE

SANSUI RG-7X (Silver & Black Model)



•SPECIFICATIONS

Input sensitivity and Impedance (1 kHz)

| | |
|--|-------------------|
| SOURCE IN, TAPE PLAY | 150 mV/47 kilohms |
| (Max. input capability; 8V, 20 Hz to 20 kHz) | |
| MIC..... | 0.5 mV/10 kilohms |
| (Max. input capability; 25 mV, 100 Hz to 15 kHz) | |
| GUITAR | 5 mV/100 kilohms |

Output level and impedance (1 kHz)

| | |
|-----------------|------------------|
| TAPE REC | 150 mV/1 kilohms |
| PREAMP OUT..... | 150 mV/1 kilohms |

Total harmonic distortion (1V, 20 Hz to 20 kHz)

| | |
|----------------------------|-------|
| SOURCE IN, TAPE PLAY | 0.05% |
|----------------------------|-------|

Frequency response (0.5V)

| | |
|----------------------------|------------------------------------|
| SOURCE IN, TAPE PLAY | 20 Hz to 20 kHz, +0 dB, -0.5 dB |
|----------------------------|------------------------------------|

Signal to noise ratio (Short-circuit, A-network)

| | |
|----------------------------|-------|
| SOURCE IN, TAPE PLAY | 75 dB |
|----------------------------|-------|

Channel separation (1 kHz)

| | |
|----------------------------|-------|
| SOURCE IN, TAPE PLAY | 70 dB |
|----------------------------|-------|

Echo time 0~3 sec. (-60 dB)

Duet time..... 25 msec and 50 msec.

Others

Power voltage 110 ~ 120/220 ~ 240V
(50/60 Hz)

For U.S.A and Canada 120V (60 Hz)

Power consumption 20 watts

Dimensions 430 mm (16-15/16") W

87 mm (3-7/16") H

228 mm (9") D

Weight 3.3 kg (7.3 lbs.) net

3.9 kg (8.6 lbs.)
packed

* Design and specifications subject to change without notice for improvements.

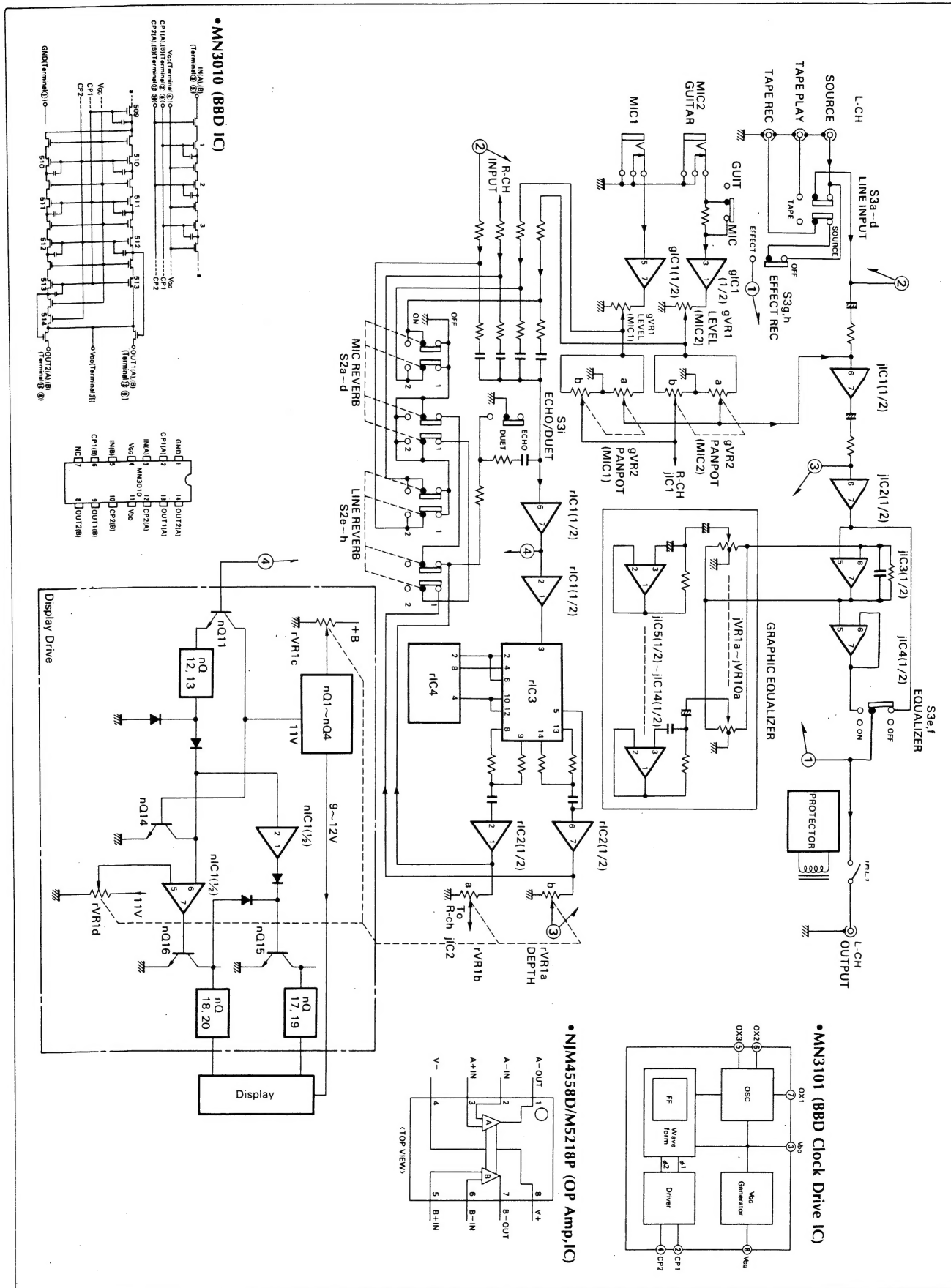
CAUTION

1. Use only replacement parts recommended by the manufacturer.
2. Measure insulation resistance before returning the appliance to the customer to prevent electrical shock.



SANSUI ELECTRIC CO., LTD.

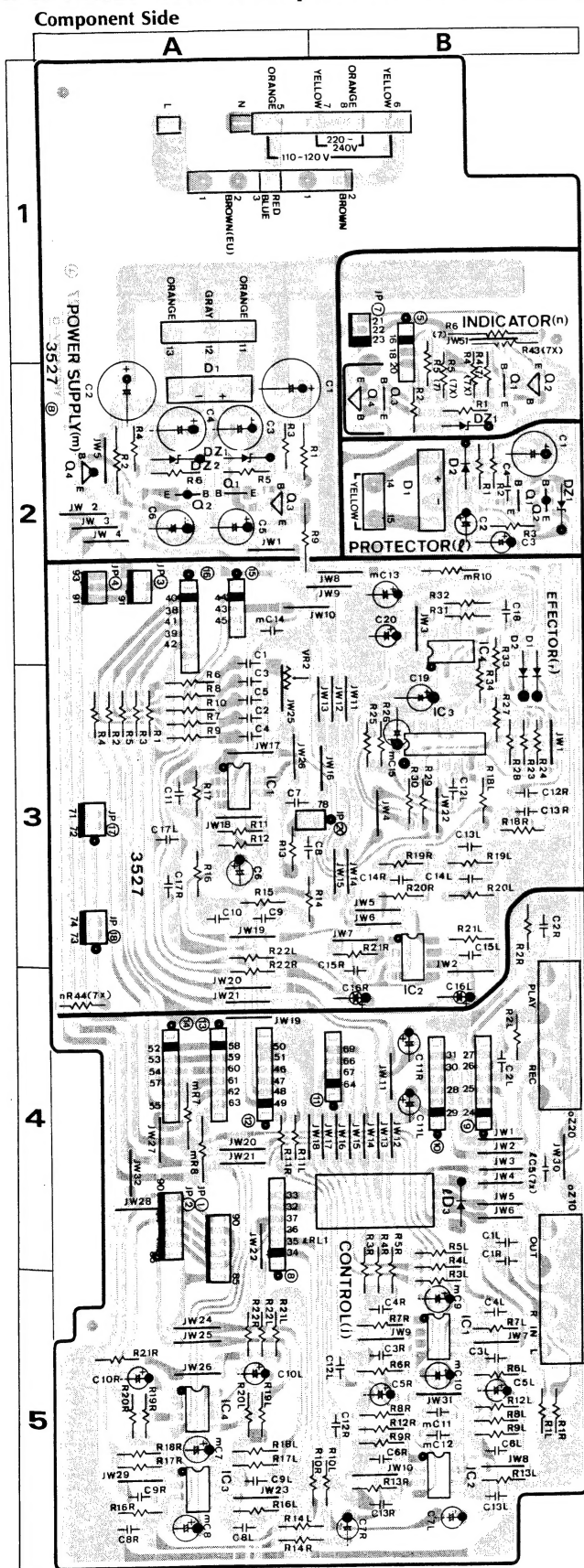
1. BLOCK DIAGRAM



2. PARTS LOCATION & PARTS LIST

2-1. F-3527 Control Amp. Circuit Board (Stock No. 00748201)

•Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.

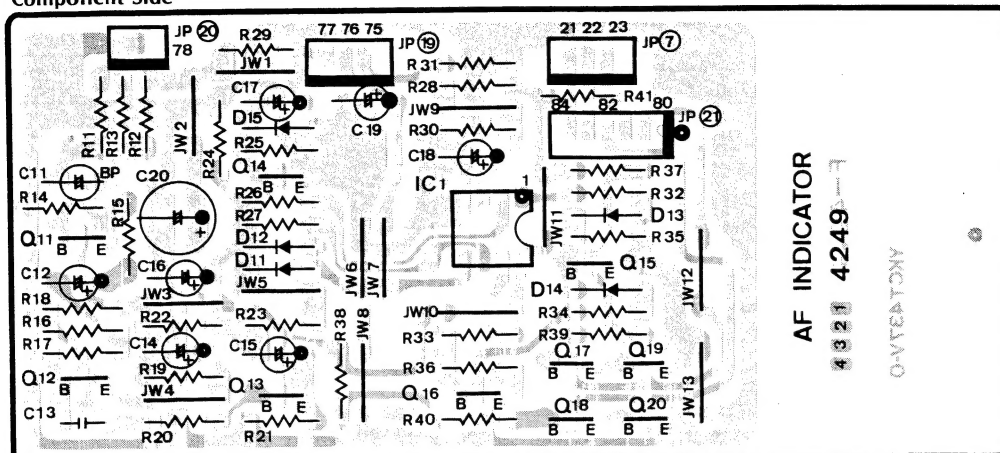


Parts List

| Parts No. | Stock No. | Description |
|--------------|-------------|---------------------------------|
| •IC | | |
| iIC1 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| iIC2 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| iIC3 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| iIC4 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| •Transistor | | |
| IQ1 | 07194801 | 2SC1815 |
| IQ2 | 07194701 | 2SA1015 |
| •Diode | | |
| ID1 | 03117000 | RB-152 |
| ID2 | 03117600 | 1S2473T77 |
| | or 46086000 | 1S1588TP |
| ID3 | 03117700 | 10E-2 |
| •Zener Diode | | |
| IDZ1 | 46112100 | 05Z6 8-Y |
| | or 46112200 | 05Z6 8-Z |
| IRL1 | 11504700 | Relay |
| | or 11504701 | Relay |
| •Transistor | | |
| mQ1 | 07194801 | 2SC1815 |
| mQ2 | 07194701 | 2SA1015 |
| mQ3 | 03086101 | 2SD357 |
| | or 03083901 | 2SD313 |
| mQ4 | 03034401 | 2S8527 |
| | or 03032301 | 2S8507 |
| •Diode | | |
| mD1 | 03117000 | RB-152 |
| mDZ1 | 03179400 | RD16E-B |
| | or 46114800 | 05Z16-Y |
| mDZ2 | 03179400 | RD16E-B |
| | or 46114800 | 05Z16-Y |
| •Transistor | | |
| nQ1 | 07194801 | 2SC1815 |
| nQ2 | 03083901 | 2SD313 |
| nQ3 | 07194801 | 2SC1815 |
| nQ4 | 03083901 | 2SD313 |
| •Zener Diode | | |
| nDZ1 | 46114200 | 05Z13-Y |
| | 07249100 | 4P Input Terminal Board |
| | 07249100 | 4P Input Terminal Board |
| •IC | | |
| rIC1 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| rIC2 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| rIC3 | 46080200 | MN3010 |
| rIC4 | 46080300 | MN3101 |
| •Diode | | |
| rD1 | 03117600 | 1S2473T77 |
| rD2 | 03117600 | 1S2473T77 |
| rVR2 | 10351900 | 100kΩ(B) S.V.R., Echo level adj |

2-2. F-4249 Reverberation Indicator Control Circuit Board (Stock No. 00747901)

Component Side



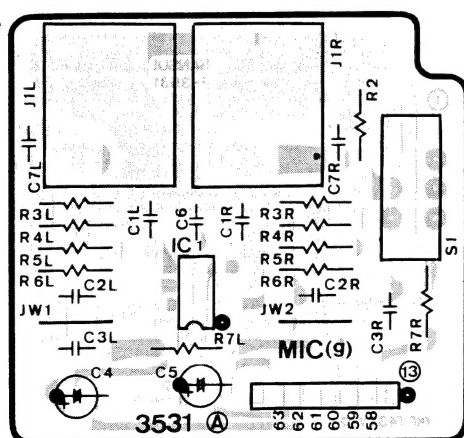
Parts List

| Parts No. | Stock No. | Description |
|-------------|-------------|-------------|
| •Transistor | | |
| nQ11 | 46367301 | 2SC2458 |
| | or 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| nQ12 | 46367301 | 2SC2458 |
| | or 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| nQ13 | 46367301 | 2SC2458 |
| | or 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| nQ14 | 46367301 | 2SC2458 |
| | or 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| nQ15 | 46367301 | 2SC2458 |
| | or 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| nQ16 | 46367301 | 2SC2458 |
| | or 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| nQ17 | 46367301 | 2SC2458 |
| | or 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |

| Parts No. | Stock No. | Description |
|-----------|-------------|--------------|
| nQ18 | 46367301 | 2SC2458 |
| | or 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| nQ19 | 46543501 | 2SC3243 |
| nQ20 | 46543501 | 2SC3243 |
| •IC | | |
| nIC1 | 46580100 | M5218P |
| | or 03607700 | NJM4558D |
| •Diode | | |
| nD11 | 46086000 | 1S1588TP |
| | or 03117600 | 1S2473T77 |
| nD12 | 46086000 | 1S1588TP |
| | or 03117600 | 1S2473T77 |
| nD13 | 46086000 | 1S1588TP |
| | or 03117600 | 1S2473T77 |
| nD14 | 46086000 | 1S1588TP |
| | or 03117600 | 1S2473T77 |
| nD15 | 46086000 | 1S1588TP |
| | or 03117600 | 1S2473T77 |
| nC11 | 08451700 | 1μF 50V E.B. |

2-3. F-3531 Mic Amp. Circuit Board (Stock No. 00748601)

Component Side



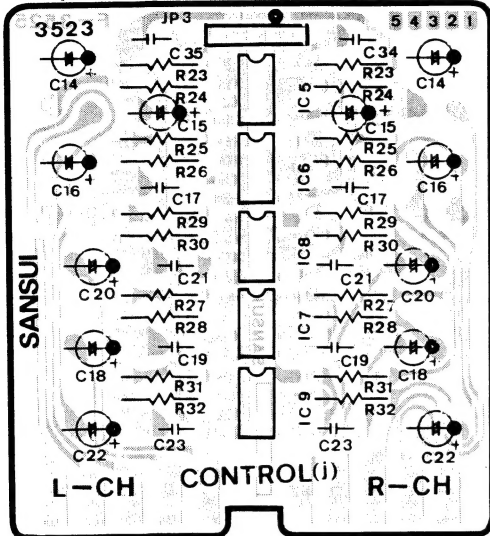
Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------|
| •IC | | |
| gIC1 | 07208900 | NJM4558D-X |
| oS1 | 46612100 | Push SW., MIC/GUITAR |
| oJ1 | 46085000 | Jack, MIC |

2-4. F-3523 Low Range Filter Amp.

Circuit Board (Stock No. 00748001)

Component Side



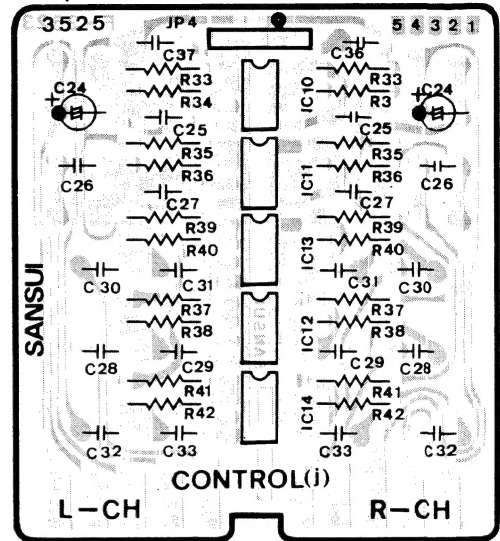
Parts List

| Parts No. | Stock No. | Description |
|-----------|-------------|-------------|
| •IC | | |
| jIC5 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| jIC6 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| jIC7 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| jIC8 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| jIC9 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |

2-5. F-3525 High Range Filter Amp.

Circuit Board (Stock No. 00748101)

Component Side



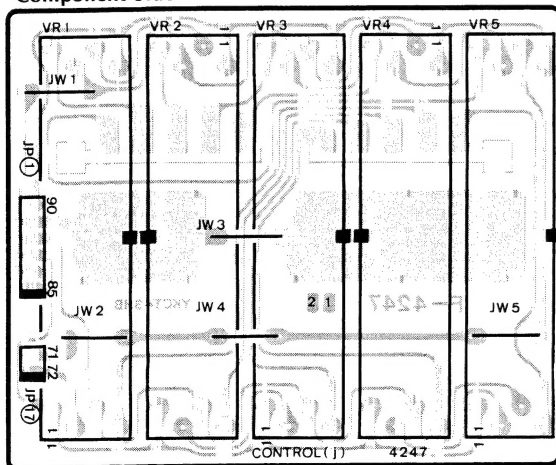
Parts List

| Parts No. | Stock No. | Description |
|-----------|-------------|-------------|
| •IC | | |
| jIC10 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| jIC11 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| jIC12 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| jIC13 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |
| jIC14 | 03607700 | NJM4558D |
| | or 46580100 | M5218P |

•Note: The circuit boards, F-4247, F-4248, F-3532, F-3528, F-3529 & F-3530 are not supplied as the assembled. However, the individual parts on the circuit board are provided by orders.

2-6. F-4247 Low Range Volume Circuit Board

Component Side

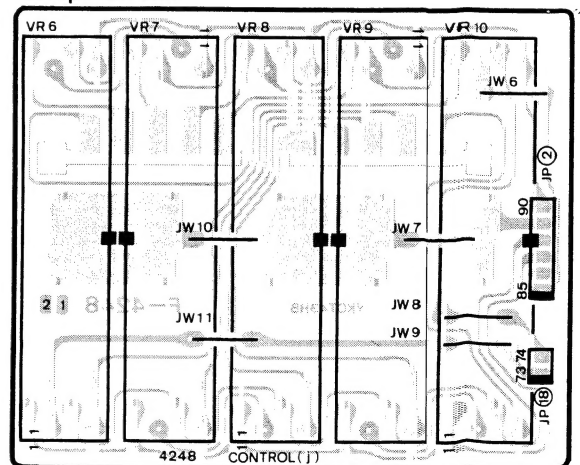


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|------------------------------|
| jVR1 | 46612400 | 250kΩ × 2 Slide V.R., 30 Hz |
| jVR2 | 46612400 | 250kΩ × 2 Slide V.R., 60 Hz |
| jVR3 | 46612400 | 250kΩ × 2 Slide V.R., 125 Hz |
| jVR4 | 46612400 | 250kΩ × 2 Slide V.R., 250 Hz |
| jVR5 | 46612400 | 250kΩ × 2 Slide V.R., 500 Hz |

2-7. F-4248 High Range Volume Circuit Board

Component Side

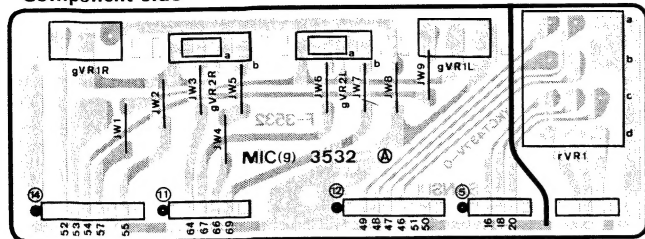


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|------------------------------|
| jVR6 | 46612400 | 250kΩ × 2 Slide V.R., 1 kHz |
| jVR7 | 46612400 | 250kΩ × 2 Slide V.R., 2 kHz |
| jVR8 | 46612400 | 250kΩ × 2 Slide V.R., 4 kHz |
| jVR9 | 46612400 | 250kΩ × 2 Slide V.R., 8 kHz |
| jVR10 | 46612400 | 250kΩ × 2 Slide V.R., 16 kHz |

2-8. F-3532 Mic & Reverberation Control Volume Circuit Board

Component Side

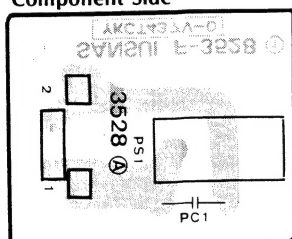


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------------|
| rVR1 | 46097700 | 100kΩ(B) × 4 V.R., DEPTH |
| gVR1L | 46097600 | 20kΩ(A) V.R., LEVEL-CH1 |
| gVR1R | 46097600 | 20kΩ(A) V.R., LEVEL-CH2 |
| gVR2L | 46097500 | 250kΩ(MN) V.R., PANPOT-CH1 |
| gVR2R | 46097500 | 250kΩ(MN) V.R., PANPOT-CH2 |

2-9. F-3528 POWER Switch Circuit Board

Component Side

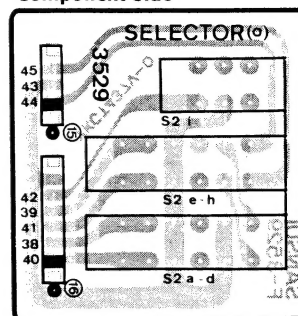


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|-------------------|
| PC1 | 46425800 | 10000pF 400V C.C. |
| PS1 | 46360400 | Push SW., POWER |

2-10. F-3529 REVERB-LINE/-MIC/-MODE Switch Circuit Board

Component Side

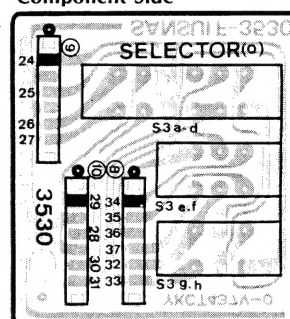


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|-------------|
| oS2 | 46612300 | Push SW. |

2-11. F-3530 LINE INPUT/EQUALIZER/EFFECT REC Circuit Board

Component Side



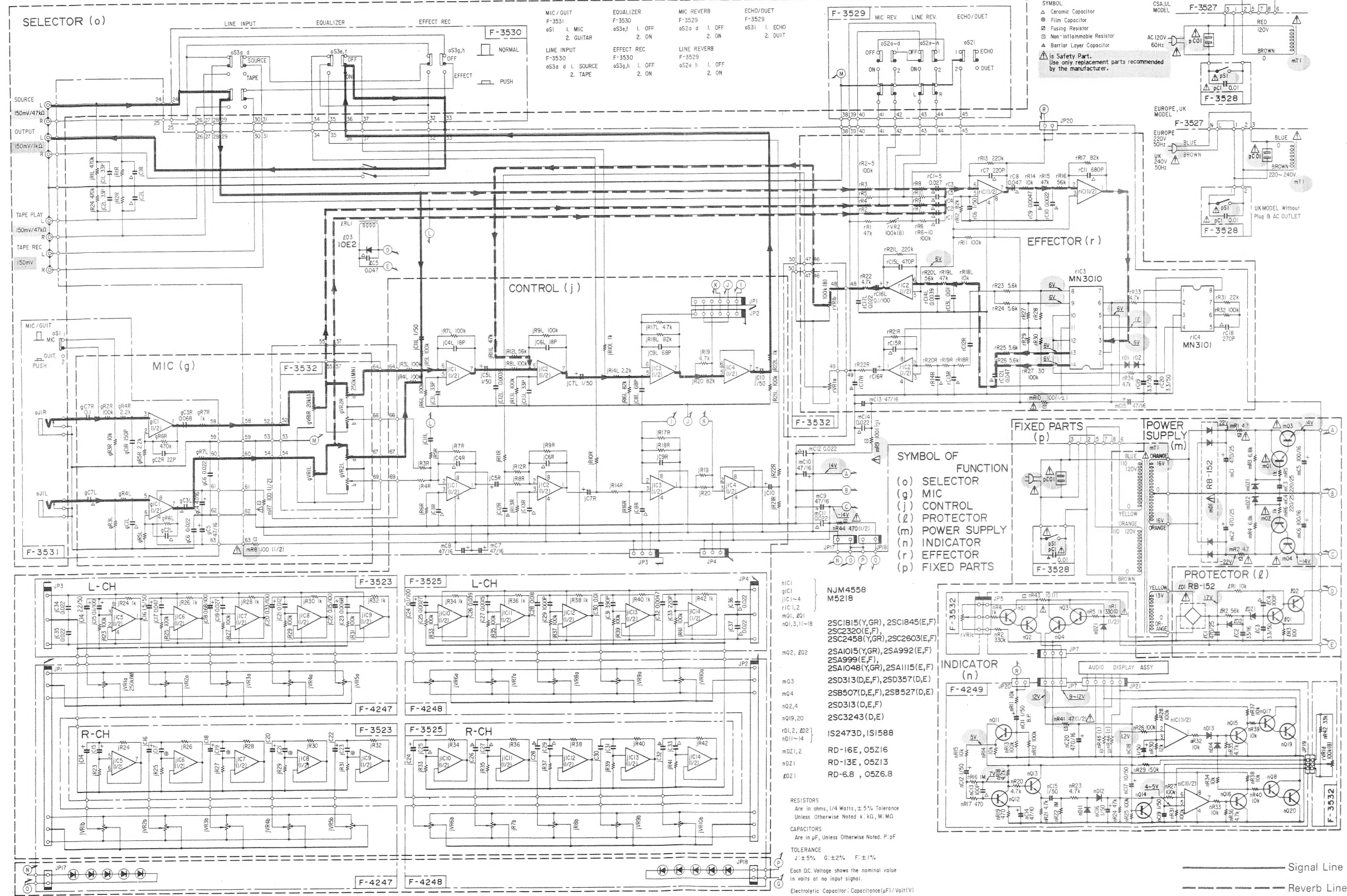
Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|-------------|
| oS3 | 46612200 | Push SW. |

●Abbreviations

| | |
|--|---|
| C.R. : Carbon Resistor | E.B. : Bi-Polar Electrolytic Capacitor |
| S.R. : Solid Resistor | E.B.L. : Low Leak Bi-Polar Electrolytic Capacitor |
| Ce.R. : Cement Resistor | Ta.C. : Tantalum Capacitor |
| M.R. : Metal Film Resistor | F.C. : Film Capacitor |
| F.R. : Fusing Resistor | M.P. : Metalized Paper Capacitor |
| N.I.R. : Non-Inflammable Resistor | P.C. : Polystyrene Capacitor |
| C.C. : Ceramic Capacitor | G.C. : Gimmic Capacitor |
| C.T. : Ceramic Capacitor, Temperature Compensation | V.R. : Variable Resistor |
| E.C. : Electrolytic Capacitor | S.V.R. : Semi Variable Resistor |
| E.L. : Low Leak Electrolytic Capacitor | SW. : Switch |

3. SCHEMATIC DIAGRAM



1

2

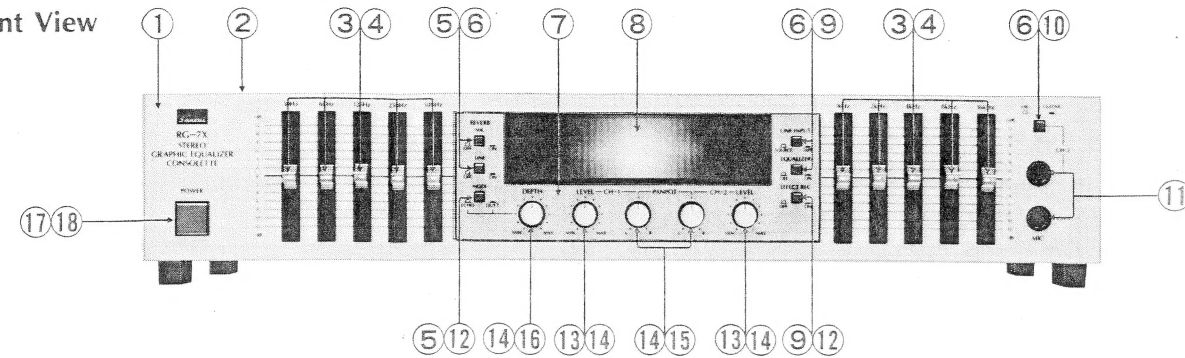
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4

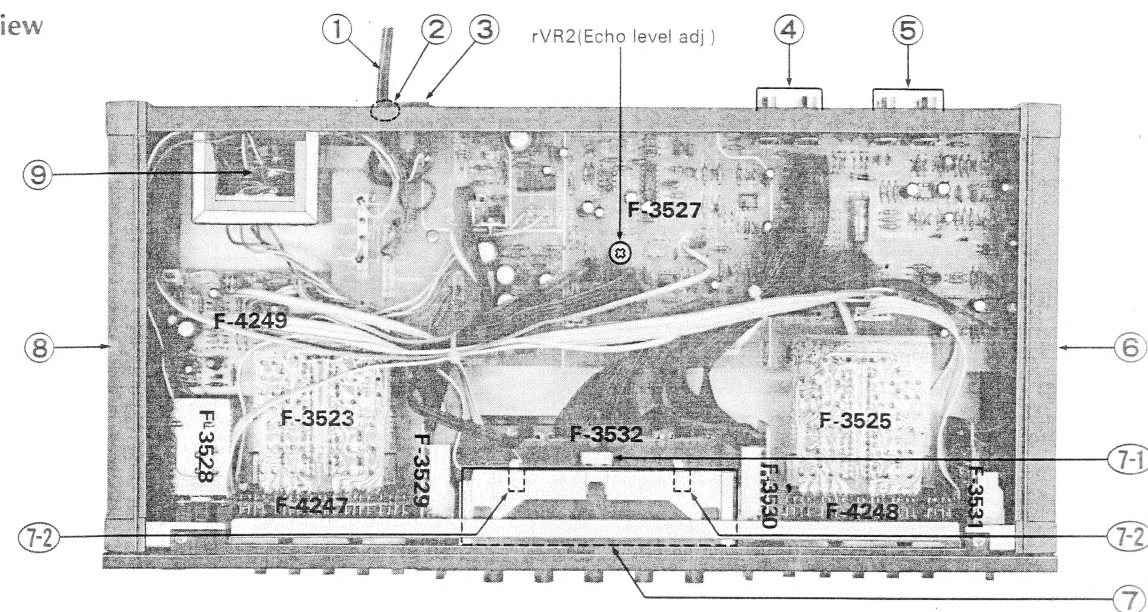
5

4. OTHER PARTS

4-1. Front View



4-2. Top View



Parts List <Front View>

| Parts No. | Stock No. | Description |
|------------------------|-----------|---|
| <Silver & Black Model> | | |
| 2 | 07601400 | Bonnet |
| 3 | 46612400 | 250kΩ x 2 Slide V.R., Equalizer level |
| 5 | 46612300 | Push SW., REVERB-LINE/-MIC/-MODE |
| 8 | 07764300 | Indicator Window |
| 9 | 46612200 | Push SW., LINE INPUT/EQUALIZER/EFFECT REC |
| 10 | 46612100 | Push SW., CH-2 MIC/GUITAR |
| 11 | 46085000 | Jack, MIC |
| 13 | 46097600 | 20kΩ (A) V.R., CH-1, 2 LEVEL |
| 15 | 46097500 | 250kΩ (MN) V.R., CH-1, 2 PANPOT |
| 16 | 46097700 | 100kΩ (B) x 4 V.R., REVERB-DEPTH |
| 17 | 46360400 | Push SW., POWER |
| <Silver Model> | | |
| 1 | 47210100 | Front Panel Ass'y |
| 4 | 47211000 | Slide Knob, Equalizer level |
| 6 | 07580100 | Push Knob, LINE INPUT etc., |
| 7 | 47211500 | Sub Panel Ass'y |
| 12 | 47221100 | Push Knob, EFFECT REC/REVERB-MODE |
| 14 | 07764500 | Knob, CH-1, 2 LEVEL/PANPOT |
| 18 | 47210600 | Push Knob, POWER |
| <Black Model> | | |
| 1 | 47210200 | Front Panel Ass'y |
| 4 | 47211100 | Slide Knob, Equalizer level |

| Parts No. | Stock No. | Description |
|-----------|-----------|-----------------------------------|
| 6 | 07580200 | Push Knob, LINE INPUT etc., |
| 7 | 47221200 | Sub Panel Ass'y |
| 12 | 47221100 | Push Knob, EFFECT REC/REVERB-MODE |
| 14 | 07764600 | Knob, CH-1, 2 LEVEL/PANPOT |
| 18 | 47210700 | Push Knob, POWER |

Parts List <Top View>

| Parts No. | Stock No. | Description |
|-----------|-----------|---|
| 1 | 38004700 | Power Supply Cord |
| 2 | 39106000 | Strain Relief |
| 3 | 07189600 | AC Outlet |
| 4 | 07249100 | 4P Input Terminal, TAPE |
| 5 | 07249100 | 4P Input Terminal, SOURCE IN/PREAMP OUT |
| 6 | 07601810 | Side Panel (Right) |
| 7 | 46607600 | Indicator Box Ass'y |
| 7-1 | 46133000 | Main Indicator Lamp with Socket |
| 7-2 | 46132900 | Sub Indicator Lamp |
| 8 | 07601710 | Side Panel (Left) |
| 9 | 15004201 | Power Transformer |

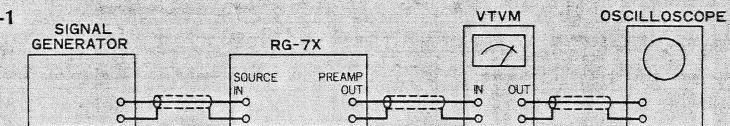
5. ECHO LEVEL ADJUSTMENT (See Top View)

SETTING: 1) Connect the measurement units as Fig. 5-1.

2) Set the control knobs as follows.

| | | | |
|---------------------|--------|----------------------|--------|
| REVERB-MIC | OFF | REVERB-LINE | ON |
| REVERB-MODE | ECHO | REVERB-DEPTH | Max. |
| CH1/CH2 LEVEL | Min. | CH1/CH2 PANPOT | Center |
| LINE INPUT | SOURCE | EQUALIZER | OFF |

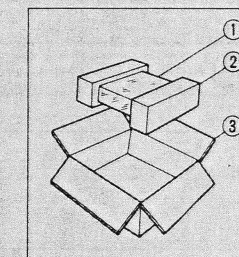
Fig. 5-1



| INPUT SIGNAL | MEASURE OUTPUT | STEP | ADJUSTMENT |
|--------------------------------|---------------------------|------|--|
| 800 Hz 1.5V SC SOURCE IN | PREAMP OUT VTVM, Scope | 1 | Turn the semi-variable resistor rVR2 (F-3527) fully clockwise. |
| | | 2 | Push LINE INPUT switch to set to TAPE position. |
| | | 3 | Confirm that the reverberation circuit starts to oscillate, and its wave form comes out from PREAMP OUT. |
| | | 4 | Turn rVR2 slowly counterclockwise until the oscillation stops. |

6. PACKING LIST

| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------------|
| 1 | 07599500 | Vinyl Cover |
| 2 | 07661900 | Styrofoam Packing |
| 3 | 47209900 | Carton Case (Silver Model) |
| | 47210000 | Carton Case (Black Model) |



7. ACCESSORY LIST

| Stock No. | Description |
|-----------|-----------------------|
| 46606600 | Operating Instruction |
| 38103300 | PJP Cord |



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